

Application Serial No.: 10/520,625  
Reply to Office Action dated June 25, 2007

IN THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 6. This sheet, which includes Fig. 6, replaces the original sheet including Fig. 6.

Attachment: Replacement Sheet

REMARKS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 14, 15, 25, and 26 are presently pending in the present application. Claims 1-13 and 16-23 have been canceled without prejudice or disclaimer.

In the outstanding Official Action, the drawings were objected to under 37 CFR §§1.83(a) and 1.84(p)(4). Submitted concurrently herewith is a Replacement Sheet that includes changes to Figure 6 to address the objections. Applicant submits that the changes to Figure 6 set forth in the Replacement Sheet overcome the drawings objections and do not raise new matter, as agreed during the interview conducted on March 9, 2007. Accordingly, Applicant requests the withdrawal of the objection to the drawings.

The disclosure was objected to for minor informalities. The specification has been amended to address the informalities noted in the Office Action, and to make the description correspond to the changes made to Figure 6. Accordingly, Applicant requests the withdrawal of the objection to the disclosure.

Claims 11, 14, 24, and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gustafsson et al. (U.S. Patent No. 5,746,958) in view of Taguchi et al. (U.S. Patent No. 6,228,301) and Barnes (U.S. Patent No. 3,538,595). Claims 15 and 26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gustafsson et al. in view of

Taguchi et al. and Barnes and further in view of Hayashi et al. (U.S. Patent No. 5,301,881).

For the reasons discussed below, the Applicant traverses the obviousness rejections.

The basic requirements for establishing a *prima facie* case of obviousness as set forth in MPEP §2143 include (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the reference (or references when combined) must teach or suggest all of the claim limitations. Applicant submits that a *prima facie* case of obviousness has not been established in the present case because the cited references, either when taken singularly or in combination, fail to teach or suggest all of the claim limitations.

Claims 14 and 15 each recite a manufacturing apparatus comprising, among other features: a first crushing device configured to crush a resin waste material; a second crushing device configured to crush a wood waste material; one or more of a magnet, an eddy current separator device, and a gravity separator; a third crushing device configured to further crush the crushed waste wood material crushed by the second crushing device and separated by one or more of the magnet, the eddy current separator device, and the gravity separator, to produce fine chips; a grinding device configured to grind the fine chips into a fine powder; and a blending mixer configured to mix the fine powder of the wood waste material and the crushed resin waste material to produce a mixed material. The cited references, either when taken singularly or in combination, fail to teach or suggest all of the above claim limitations.

The Gustafsson et al. reference depicts in Figure 1 a wood component feed (10) and a thermoplastic component feed (20). The wood component (10) first undergoes a size reduction step (30A), and then the resulting finely reduced wood component is conveyed to a weigh system (40). The thermoplastic component (20) undergoes a size reduction step (30B), and then the resulting thermoplastic component is fed to the weigh system (40). The wood component and the thermoplastic component meet in the weigh system (40), where the initial commingling of the two components takes place. The weigh system (40) proportions the two components in a ratio that will create an acceptable product. The weigh system (40) has an output (45) that leads to a high capacity pellet mill (100) that converts the output into a high bulk density (HBD) feedstock.

As acknowledged in the Official Action, the Gustafsson et al. reference does not disclose a third crushing device, or a grinding device in conjunction with the size reduction step (30A) of the Gustafsson et al. reference, which is cited as the second crushing device of the present invention. Instead, the Official Action cites the Taguchi et al. reference for the teaching of three stage pulverizing equipment.

The Taguchi et al. reference describes a manufacturing method of a simulated wood product that first includes the recycling and separation of wooden members and resinous members. Next, a mixing process is performed in which lumps of recycled wooden members and recycled resinous members are dispensed into a mixer with a plurality of rotating blades. Then, after the mixing of the wooden members and the resinous members, the three stage

pulverizing process begins, which includes a first pulverizing (crushing) process, a second grinding process and a third pulverizing process. The pulverizing process is performed in the Taguchi et al. reference on the mixture of the wooden members and the resinous members. In fact, the Taguchi et al. reference expressly teaches the pulverizing process is performed after mixing of the wooden members and the resinous members, as an object of the invention. (Col. 2, lines 56-63.)

Thus, based upon the express teachings of the Taguchi et al. reference when combined with the teachings of the Gustafsson et al. reference, the pulverizing process of the Taguchi et al. reference would have been performed on the output (45) of the weight system (40), and not during the size reduction step (30A) of the Gustafsson et al. reference, as suggested in the Official Action. Modifying the size reduction step (30A), which is solely for the wood component (10), to include the pulverization process of the Taguchi et al. reference would be contrary to the express teachings of the Taguchi et al. reference (see col. 2, lines 20-63, and MPEP 2141.02VI.), and thus is clearly predicated on hindsight considerations.

The Barnes reference is cited for the teaching of a cylindrical extruder, and thus does not add to the discussion above regarding the combined teachings of the Gustafsson et al. reference and the Taguchi et al. reference. The Hayashi et al. reference is cited for the teaching of an eddy current separator and a gravity separator, but does not add to the discussion above regarding the combined teachings of the Gustafsson et al. reference and the Taguchi et al. reference.

Therefore, the combined teachings of the Gustafsson et al. reference, the Taguchi et al. reference, the Barnes reference, and the Hayashi et al. reference fail to disclose or even suggest *a third crushing device configured to further crush the crushed waste wood material* crushed by a second crushing device and separated by ... *to produce fine chips; a grinding device configured to grind the fine chips into a fine powder; and a blending mixer configured to mix the fine powder of the wood waste material and the crushed resin waste material crushed by a first crushing device to produce a mixed material*, as recited in Claims 14 and 15. As acknowledged in the Official Action, the Gustafsson et al. reference does not disclose a third crushing device and a grinding device that produces a fine powder that is sent to a blending mixer for mixing with a crushed resin material. Furthermore, as discussed above, the Taguchi et al. reference teaches a pulverizing process that is performed after mixing, thus the Taguchi et al. reference also does not teach or even suggest a third crushing device and a grinding device that produces a fine powder that is sent to a blending mixer for mixing with a crushed resin material. In fact, the Taguchi et al. reference teaches away from providing such pulverization devices prior to a mixing device. (See col. 2, lines 20-63.) Accordingly, the combined teachings of the Gustafsson et al. reference, the Taguchi et al. reference, the Barnes reference, and the Hayashi et al. reference fail to disclose or even suggest all of the limitations recited in Claims 14 and 15, absent the improper use of hindsight.

The dependent claims are considered allowable for the reasons advanced for the independent claim from which they depend. These claims are further considered allowable as

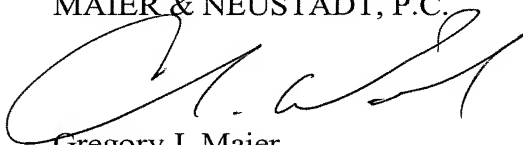
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they recite other features of the invention that are neither disclosed nor suggested by the applied references when those features are considered within the context of their respective independent claim.

Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully Submitted,

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